children there was no exposure to tuberculosis, and only 8.5 per cent of their 126 "positive cases" came because of exposure to tuberculosis at home. These figures are at variance with accepted belief and if continued may change our present point of view that contact with infected surroundings is a leading etiological factor in the causation of tuberculosis in young children.

The point which principally impresses me in this paper is that the authors use the cutaneous tuberculin test merely as an indicator, not as a positive diagnostic sign, drawing conclusions only after a complete clinical and x-ray examination. Fishberg does not believe that children between three and five years of age with positive skin reactions are doomed necessarily to active phthisis. The authors themselves have shown that the smallest per cent of positive reaction (6.4 per cent) occurs under age four. At this age, or before, we should like to detect the incidence of tuberculosis, not in later ages after it has become active. The largest percentage of positive reactions in the patients of Seitz and Dickey was between twelve and fourteen years. Were not many of these in patients with healed lesions and if so what percentage? The authors have rightly shown the valuelessness of the once-accepted D'Espine sign, with which view most clinicians agree and stress their x-ray findings. Armand-Delille at the Herold Hospital, Paris, uses the x-ray routinely in infants under one year of age and places great diagnostic importance on his roentgenological findings.

The present authors have made an interesting classification with their three groups of x-ray findings, based upon involvement of lung parenchyma. Perhaps greater study and investigation along this line may help to diagnose tuberculosis in the young infant. We who treat principally adult tuberculosis realize that the disease can only be eradicated by detecting and controlling it in infancy. The work just presented should be continued because it is not only of scientific interest, but of benefit to the community at large.

AUTHORS (closing)—As noted by Voorsanger, the largest percentage of positive reactors was in the twelve- to fourteen-year group, and most of these gave evidence of healed lesions. All of the children with active tuberculosis were younger than this.

We wish to thank Doctors Faber, Gelston, and Voorsanger for their interesting discussions.

Simple Classification of Goiter—J. Earl Else, Portland, Oregon (Journal A. M. A.), presents a pathologic and a clinical classification of goiter, the latter being an amplification of the former. Else holds that the term goiter should be limited to those pathologic processes that directly result from an iodin deficiency. There are two main divisions in his classification: colloid and hyperplastic. The second group is divided into the cellular and the acinar. The cellular is divided into the nontoxic and the toxic; the latter into adenoma, adenomatosis or diffuse adenomatous and compensatory hyperplasia. Each of these groups is further subdivided into the nontoxic and toxic. The clinical classification is based on the presence or absence of the symptoms and signs of hyperthyroidism. If there is no evidence of hyperthyroidism, the process is spoken of as simple or nontoxic; but if there is evidence of hyperthyroidism, it is then referred to as toxic. The acinar type always begins as simple or nontoxic and then later often becomes toxic. True colloid goiter is never toxic, but sometimes there is hypofunction due to alteration in cell shape lowering its activity in addition to the primary iodin deficiency. This classification meets the requirements in being simple, including all primary pathologic processes, covering all the clinical types, being descriptive of each, and not adding a single new term to an already overcrowded literature.

Sulpharsphenamin in Treatment of Warts—In the treatment of plane warts of the face, Richard L. Sutton, Kansas City, Missouri (Journal A. M. A.), secured very satisfactory results from the intramuscular injection of sulpharsphenamin. The average dose has been 0.4 gm., and only sulpharsphenamin has been employed. The drug is dissolved in a minimal amount of sterile water, and injected directly into the gluteal muscles. In each instance only one injection was required.

PULMONARY NEOPLASMS †

A DISCUSSION OF THEIR INCREASING PREVALENCE DIAGNOSIS AND TREATMENT

By C. E. ATKINSON *

LUNG TUMORS occur more frequently than commonly supposed. Recent statistics reveal a considerably larger number of primary lung cancers—an increase in part due to greater diagnostic acumen, but in part actual. As a cause, evidence points most strongly to the influenza epidemic.

The symptoms of tumor and tuberculosis are almost identical, but the age periods are usually different. However, carcinoma tends to appear earlier in life than formerly. Yet if symptoms first appear after 40, cancer should be kept in mind. Pain, often prominent, tends to occur early, to persist or recur and to progress. Often worse at night, it may seem deep in the chest. Pain persisting after effusion forms is especially suggestive. Pain may be referred to the epigastrium; or shoulder and arm pains may occur with sympathetic phenomena and simulate a cord or meningeal lesion. Pronounced throat symptoms may occur just as in pulmonary tuberculosis without laryngeal signs. Dyspnea disproportionate to the general condition, cyanosis, and venous obstruction are of particular import. Sanguinous pleural effusion occurs in both tuberculosis and cancer. A fluid which becomes bloody only after repeated tapping, which gives but temporary relief, is said to have special diagnostic value. In tuberculosis it is claimed the fluid is more often bloody on a first tapping and subsequently clear, and tapping usually relieves. Currant-jelly or prune-juice sputum is said to favor cancer. Rarely, tumor particles are expectorated, and certain polymorphous sputum cells are held pathognomonic. A normal pulse with fever is said to suggest cancer. Weight loss and cachexia develop later in lung cancer than in other malignancies.

Many now believe the local irritation from tuberculosis may give rise to cancer; and the two diseases not rarely coexist.

Physical signs are often negative and usually indefinite, which in itself is suspicious. Over the tumor, flatness tends to develop, and if accompanied by weak or absent breath sounds without rales, this is against tuberculosis, but may cause confusion with fluid or abscess. A neoplasm tends to push the heart and trachea to the opposite side, while scar shrinkage from tuberculosis draws these organs toward the affected side.

Special methods include the use of the bronchoscope and endoscope, which in skilled hands may yield valuable data. Roentgen study though ex-

† Abstract of an article read before the Section on Tuberculosis of the Los Angeles County Medical Society, May 25, 1926.

* **C. E. Atkinson** (Banning California). **M. D.** University of California (Los Angeles Department), 1907. **Practice** limited to Tuberculosis since 1912. **Graduate study:** Internship Los Angeles General Hospital, 1907-8. Instructor in medical clinic, Los Angeles Medical Department University of California, 1908-12. **Hospital connections:** Member of staff, Pottenger Sanatorium for Tuberculosis, 1913-15; medical director Seymour Sanatorium, 1919-21; consultant Henderson Sanatorium, 1921-26; **now medical** director Southern Sierras Sanatorium (Banning). **Publications:** "Lessons on Tuberculosis and Consumption," 1922, and articles in current medical periodicals.

tremely useful is not infallible. Ordinarily a new growth produces a roughly circular shadow, which may originate either in the parenchyma or hilum, may or may not be circumscribed, and may be accompanied by smaller metastatic shadows. Multiple tumors usually cast larger shadows than tuberculosis, and the surrounding lung is clearer. Secondary carcinosis shadows are likely to be most thickly set at the base. The growth may show only as a haziness and x-ray evidence may even be entirely lacking, though it is rare to have negative findings when symptoms are present. If effusion is found, it should be aspirated and x-ray study made at once. A diagnostic pneumothorax may prove helpful. In doubtful cases of mediastinal shadow the esophagus may be filled with barium for screen study. Misleading conditions include intrathoracic thyroid, enlarged thymus, actinomycosis, nocardiosis, hydatid disease, encysted empyema, abscess, cold abscess, unresolved or caseous pneumonia, lung syphilis and aneurism. Benign lung tumors are rare, so the differentiation is mainly between carcinoma, sarcoma, lymphosarcoma, endothelioma, and Hodgkin's disease.

A few cases of successful surgical removal of lung tumors have been reported. Roentgen therapy has prolonged life for years in lymphosarcoma and Hodgkin's disease, even bringing apparent cure, and in cancer has produced a few favorable results. With deep therapy now in wider use, the outlook is brighter. Radium externally and bronchoscopically applied, was successful in one case. Among general remedies, selenium and copper have been used abroad with some success. A promising method is the intravenous use of lead, but this preparation is not yet obtainable for general use. For cancer, colloidal gold, and for sarcoma, Coley's fluid, merit trial, and thyroid therapy and iodides should not be disregarded. Potash, up to 90 to 180 grains a day, is also worthy of use. Many are accepting the view that there is some general predisposing factor, and cancer is rare among peoples who use no meat. A meatless nonstimulating diet in moderate quantity only should be advised, and intestinal stasis prevented.

Four cases, one primary carcinoma, one primary sarcoma with tuberculosis, one unidentified tumor which disappeared under thyroid therapy, and one probable primary carcinoma engrafted on tuberculosis and associated with syphilis, are cited.

The outlook is no longer hopeless, and with concentrated efforts it seems that in future years a not inconsiderable number of these patients will be saved.

Enormous Calculus Pyonephrosis—The case reported by Montague L. Boyd, Atlanta, Ga. (Journal A. M. A.), illustrates how painless an enormous enlargement of the kidney with very large calculi may be and the difficulty encountered at operation in such a condition. In this particular case an intracapsular enucleation of the kidney was done. The entire mass measured about 20 by 20 by 35 cm.; the decapsulated kidney, about 18 by 18 by 30 cm. It was lobulated, fairly firm, and uniformly enlarged. It weighed 196 gm. The stone paste weighed much more than that. Microscopic examination showed a mass of connective tissues with acute inflammatory processes and only an occasional glomerulus. The diagnosis was pyelonephritis, chronic and acute, and renal calculus.

CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

SUPRARENAL HEMORRHAGE

REPORT OF A CASE IN A NEW-BORN CLINICALLY RESEMBLING INTRACRANIAL HEMORRHAGE

By ESTHER BRIDGMAN CLARK *

(From the Division of Pediatrics, Stanford University Medical School, San Francisco, California.)

The occurrence of hemorrhage of the suprarenal gland in the new-born was first described by Mattei [1] in 1868, when he noted it in a statistical report of autopsy findings in fetuses and new-borns. Bilateral hemorrhage is more common than unilateral, but when the latter occurs the right kidney is more often involved than the left. It is more common in girls than boys.

Hamill [2] (1901) gives a very detailed review of the literature and 90 case reports from the literature and his own observation. Corcoran and Straus [3] (1924) also review the literature and note that about 100 cases have been reported. They add a case of their own in which the diagnosis of suprarenal hemorrhage was made in a five-day-old infant. Operation was performed, the hematoma removed and a bleeding point on the suprarenal gland ligated. Complete recovery ensued.

The etiology is obscure and is most likely not the same in all cases. Those hemorrhages occurring in stillborns or very soon after birth are considered by Rabinowitz [4] (1923) as being due to asphyxia. Corcoran and Strauss [3] also believe that in new-borns trauma and asphyxia play the most important rôles, the suprarenals being of very friable tissue and rich in blood vessels.

Some cases appear to be associated with sepsis, the blood culture having been found to be positive. Other causes that have been suggested are syphilis, hemophilia, thrombosis of the suprarenal veins, and compression of the vena cava by the liver.

Langlois and Chanin [5] (1893) produced engorgement of the suprarenal in rabbits by injecting B. pyocyaneus, Roux and Yersin [6] (1899) got the same result with B. diphtheriae.

Many of the cases are associated with purpura, especially in older infants and young children. The possibility of the purpura bearing the same relation to the suprarenal hemorrhage that pigmentation of the skin bears to the diseased suprarenal in Addison's disease has long been considered.

The symptoms are variable, but for the most part resemble those of an internal hemorrhage. There is rapid shallow breathing, air hunger, restlessness, refusal to nurse, vomiting, fever, frequent convulsions, at times an increasing anemia is noticeable. In a few infants in whom the hemorrhage is very extensive the mass has been palpated. The colon may be compressed with symptoms of intestinal obstruction. In male infants swelling of the scrotum has been noted from pressure on the left spermatic vein in hemorrhage of the left suprarenal. In practically all of the cases reported sudden onset in previously normally behaving infants or children is the rule.

CASE REPORT

From the service of the Children's Clinic, Lane Hospital. Baby girl S., No. 151119. Born April 28, 1926, at 7:30 p. m. Parents were each 22 years old and healthy. The mother was a primipara and had a normal pregnancy terminating at term in an easy, normal, five-hour

---

* **Esther Bridgman Clark** (Lane Hospital, San Francisco). **M. D.** Stanford University, 1925; **A. B.** Stanford, 1921. **Graduate study:** Senior Intern in Pediatrics, Lane Hospital, 1925-26. **Present hospital connections:** Resident in Pediatrics, Lane Hospital. **Scientific organizations:** Northern California Pediatric Association; San Francisco County Medical Society, C. M. A., A. M. A. **Practice** limited to Pediatrics.